

# **Solder Film Manufacturing Method, Heat Sink Furnished with Solder Film, and Semiconductor-Device-and-Heat-Sink Junction**

## **Abstract**

The solder film manufacturing method has a step for laminating a plurality of unit layers, each unit layer formed by laminating a plurality of layers including layers of only Zn, Bi or Sn, or layers of alloys of two of the metals Zn, Bi and Sn. This manufacturing method also preferably also has a step for forming an Sn layer as the top surface layer. A heat sink has a solder film manufactured by this process. A solder junction connects a semiconductor device characterized by having a semiconductor element mounted on this heat sink with a heat sink having this solder film.